

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Due Date: \_\_\_\_\_

**When solving the following problem, be sure to:**

- 1) Restate the question**
- 2) State your answer in a complete sentence.**
- 3) List facts and important information**
- 4) Explain your solution strategy and include your calculations/work.**

### **POW Treasure Hunt Math**

Solving a math problem sometimes involves several steps. I once heard students compare the process to a treasure hunt. That gave me the idea of creating a treasure hunt for this problem.

If there are words you don't know, you can look up their meanings using the [Math Forum search engine](http://mathforum.com/grepform.html) [http://mathforum.com/grepform.html] or another resource.



Clue: The treasure you will find at the end of this hunt is a palindrome.

To solve this puzzle, you will need to use the answers in order. If you make an error at an early stage, your final answer will not be correct. So be careful.

1. Start with the first double-digit palindromic number in the Fibonacci Sequence.
2. Add it to the square root of 625.
3. Multiply your answer by the number of days in October.
4. Divide by the first prime number greater than 50.
5. Keep only the remainder.
6. Multiply the remainder by the number of days in a week.
7. Multiply by the product of the smallest two prime numbers.

What is the smallest number you can add to create a palindrome? What palindrome will you have?

In your explanation, be sure to include the answer to each of the numbered steps above, and let me know what sources you used to find any needed information.

Please answer the problem on a separate piece of paper. You must include all your calculations and an explanation of how you got your answer. Your paper will be scored in the following way:

- 4 The answer and the bonus are correct, you have included all your calculations, and the explanation is thorough and understandable.
- 3 The answer is correct, you have included all your calculations, and the explanation is complete and clear to the reader.
- 2 The answer is missing one of the items mentioned above.
- 1 The answer is incorrect, and the explanation or calculations are poor or missing.
- 0 Minimal or no effort was made to solve the problem.
- All late work is marked down a grade.